

Work Order ID 80615***80615***

Page 1

Friday, February 24, 2012 12:41:56 PM

Item ID: D206-642-541

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Replacement Skidtube

Start Date: 2/24/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 3/6/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan: Date: 2-22-12

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start ***NR1***Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D3274	D

100

0.00

100

DOCUMENT CONTROL

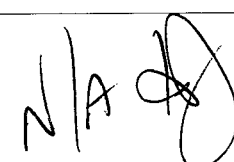
DC

Memo

0.00

Document Control

Photocopy bluefile & type labels per PPP D206-642-541 CHG003



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

110

0.00

110

Skidtubes

0.00

Skidtubes

Skidtubes

Memo

****VERIFY AND INSPECT THE MATERIAL PRIOR TO USE****

1- Bend FWD end of tube using bend prog D3274 FWD and foil 10 as per dwg D3274, cut fwd end of tube with saw table setup D3274.

2- remove fwd indexing ridge as per dwg D3274. Prepare for welding

3- weld fwd cap as per dwg D3274 and QSI004

AR Aluminum Rod Batch: m120164

4- grind fwd cap weld on top surface only

5- Cut AFT end of tube at 170.9" as per dwg D3274 and deburr end.

6-Drill Aft cap pilot hole using DT8025

7 -Cleco DT8025 in position and install pilot hole drill Jig DT8742A,B,C,D.

Drill 3/16" pilot holes as per Dwg D3274

8 -Remove inner indexing ridge on aft end of skidtube as per Dwg D3274 scribe batch #

9 -Open aft end cap holes to Ø0.208" as per Dwg D3274. Deburr aft end.

SAD 12-04-02

SAD 12-04-03

30612/04/05

SAD 12-4-9

SAD 12-04-09

SAD 12-4-9

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Run Start ***NR1***

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Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
114	QC5- Inspect part completeness to step on W/O	0.00							
114									
QC	Memo	0.00		Sizkulos					
Quality Control									
116	QC10- Inspect visual per QSI004- ground welds	0.00							
116									
QC	Memo	0.00		Sizkulos					
Quality Control									
120	Chemical Conversion Coat per QSI005 4.1	0.00							
120									
HandFinish	Memo	0.00							
Hand Finishing									

① SAA 12-04-09

W/O:		WORK ORDER CHANGES					
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Required Date: 3/6/2012 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	QC3- Inspect Part Finish	0.00							
130	QC7								
QC	Memo	0.00							
Quality Control									
150		0.00							
150	Skidtubes								
Skidtubes	Memo	0.00							
Skidtubes	1-Open Ø0.313" and 0.375" crossbolt spacer holes as per Dwg D3274								
	2-Deburr crossbolt spacer holes as per Dwg D3274 and blow out chips from inside the tube								
	3-Bond web in place as per Dwg D3274 & QSI 015.								
	A/RSikaflex-291 <u>M120813</u>								
	Sikaflex expire date: <u>12-08-13</u>								
	Start: <u>12-4-10</u> Time: <u>12:45</u>								
	Finish: <u>12-4-10</u> Time: <u>7:05</u> 9:00								
	(Adhere for 12 hours)								

DP 12-4-10
PTO
CF 12-4-10

W/O: 80615		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
12-4-10	30	Should read QC7 Done <i>[Signature]</i>	<i>[Signature]</i>	12-4-10			

Part No: D206-642-541 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Reference:

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start *NR1*

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	QC5- Inspect part completeness to step on W/O	0.00							
160						1	0	BE	12/04/11
QC	Memo	0.00							
Quality Control									
170		0.00							
170	Skidtubes								
Skidtubes	Memo	0.00							
Skidtubes	1-Bend AFT end of tube using bend prog. D3274 AFT as per dwg D3274. Install drop pins in crossbolt spacer holes to maintain web position.								
	2- DRILL PILOT HOLES FOR WEARPLATES USING D3274-1T2 OPEN HOLES TO .297" . Debur								
	3- DRILL TOE PIN HOLE .640" DIA AS PER DWG USING DT8935 FWD END OF TUBE DEBURR INSIDE OF HOLE AS NECESSARY (DO NOT ENLARGE HOLES) REMOVE ANY FOREIGN OBJECTS INSIDE OF TUBES								
	4- Countersink crossbolt spacer holes as per Dwg D3274								
	5- prepare for welding								

SAD
12-04-11

①

①

CF 12-4-11

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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Required Date: 3/6/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180	QC5- Inspect part completeness to step on W/O	0.00							
180		4.6°				1	0		
QC	Memo	0.00							BE12/04/12
Quality Control									
190		0.00							
190	Skidtubes					1	0		
Skidtubes	Memo	0.00							BE12/04/12
Skidtubes	1-Insert D2649 & D3275-1 crossbolt spacers. Weld as per QSI 004 and Dwg D3274. Remember to back drill each hole before welding the other side. Use aluminum rod A/RAluminum Rod <u>M120164</u>								
	3-Grind cross bolt welds flush as per Dwg D3274.								
	4-Counterbore 5/16" x 0.750" deep as per Dwg D3274 and deburr.								

Handwritten signature and date: CC/12/04/12

W/O:		WORK ORDER CHANGES					
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
200	QC5- Inspect part completeness to step on W/O	0.00							
200									
QC	Memo	0.00		8/2/13					
Quality Control									
210	QC10- Inspect visual per QSI004- ground welds	0.00							
210									
QC	Memo	0.00		8/2/13					
Quality Control									
220	Pressure Wash per QSI005 4.3	0.00							
220									
HandFinish	Memo	0.00							
Hand Finishing	Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch								

M. H. 7/6 12-4-17

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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 Start Date: 2/24/2012 Start Qty: 1.00 ***1*** Cust Item ID:
 Required Date: 3/6/2012 Req'd Qty: 1.00 ***1*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
230 *230* Powdercoat Powder Coating M121134	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum Memo START TIME: 1:10 OVEN TEMPERATURE: 320 °F FINISH TIME: 1:40	0.00 0.00				1X	✓		MZ 12/04/17
240 *240* QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.00				1X	✓		M12104/17
250 *250* HandFinish Hand Finishing	HandFinishing Memo 1-Install Nut Plate as per Dwg D3274. Apply LPS-3 to Nut Plate and rivets. A/RN/ALPS-3 114596 2-Install inserts as per Dwg D3274. Use a drop of Sikaflex inside insert holes a A/R/Sikaflex-291 121221 Sikaflex expire date: 13/01	0.00 0.00				1X	Ⓟ		12/04/17 BL

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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 Required Date: 3/6/2012 Req'd Qty: 1.00 *1* Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
260	QC5- Inspect part completeness to step on W/O	0.00							
260		0.00							
QC	Memo								
Quality Control	Inspect Nut Plate & Inserts								
270		0.00							
270	HAND FINISHING RESOURCE #1	0.00							
HandFinish	Memo								
Hand Finishing	1-Install wearpads & gaskets as per Dwg D3274.								
	2-Install ring as per Dwg D3274								
	A/RSikaflex-291 121221								
	Sikaflex expire date: 13/01								
	3-Inspect for foreign objects as per QSI 024								
	4-Spray inside of tube on both sides of web with LPS-3								
	A/R LPS-3 Batch: N/A.								
	5-Install Aft Cap and seal with Sikaflex. Clean excess adhesive.								
	A/RSikaflex-291 121221								
	Sikaflex expire date: 13/01								

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Run Start ***NR1***

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Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
280	QC5- Inspect part completeness to step on W/O	0.00							
280									
QC	Memo	0.00							
Quality Control									
290	Identify as per dwg & Stock Location: _____	0.00							
290									
Packaging	Memo	0.00							
Packaging									
300	QC21- Final Inspection - Work Order Release	0.00							
300									
QC	Memo	0.00							
Quality Control									

12/04/20

W/O:		WORK ORDER CHANGES					
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Picklist Print

Friday, February 24, 2012 12:42:08 PM

Page 1

Work Order ID: 80615

80615

Parent Item: D206-642-541

D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 2/24/2012

Required Date: 3/6/2012

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:B05.09.23 Revised per D206-642 Rev. JKJ/JLM
 IPP Rev:C 07-02-23 Added SS Wearplates & Gaskets JLM
 IPP Rev:D 07-12-06 replace NAS1515H3L to D3672-1 DD
 IPP Rev:E 08-04-17 as per PAR 08-015 DD verified by:EC
 IPP Rev:F 08-06-02 add comment DD verified by:EC
 IPP Rev:G 08-10-09 revise details DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2600-1-190		Manufactured	No			110	Each	121.0000	1	1			
D2600-1-190													
Extrusion Round 3" 206													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				HALL				45					
				69622				45					
				LG				76					
				76912				76					
										**	SAD 12-04-02		

D3285-1		Manufactured	No			110	Each	64.0000	1	1			
D3285-1													
Cap													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				LG002				64					
				52511				17					
				52647				47					
										**	BE12-0405		

D3282-041		Manufactured	No			150	Each	12.0000	1	1			
D3282-041													
Float Web (206L/407)													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				LG				12					
				74294				3					
				77498				9					
										**	① CF 12-4-10		

B80837

W/O:		WORK ORDER CHANGES					
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D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 2/24/2012

Required Date: 3/6/2012

Start Qty: 1.00

Required Qty: 1.00

D2649 Manufactured No 190 Each 1,428.000 12 12

D2649

Cross Bolt Spacer

B79564 BE 2/04/12

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LG	1301	
77574	2	
78019	104	
79502	403	
79503	400	
79504	392	
LG001	127	
65317	1	
68224	2	
68507	11	
71355	2	
72704	2	
72841	11	
73390	8	
73857	21	
73858	53	
73859	4	
73860	4	
78020	6	
78583	2	

D3275-1 Manufactured No 190 Each 228.0000 12 12

D3275-1

Crossbolt Spacer

BE 2/04/12

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LG002	228	
66930	106	
73393	70	
74437	52	

12

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
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Parent Item Name: Replacement Skidtube

Start Date: 2/24/2012

Required Date: 3/6/2012

Start Qty: 1.00

Required Qty: 1.00

CR3212-4-03

Purchased

No

250

Each

1,526.000

2

2

CR3212-4-03

Cherry Rivet

**

2

(28)

12/04/17

Location

Loc Qty

Loc Code

FP002

536

114859 ✓

536

ST331

990

110139

2

119017

988

D3415-041

Manufactured

No

250

Each

24.0000

1

1

D3415-041

Nut Plate

**

1

(28)

12/04/17

Location

Loc Qty

Loc Code

ST042

24

67605 ✓

24

CCR264SS3-3

Purchased

No

250

Each

781.0000

2

2

CCR264SS3-3

Cherry Rivet

**

2

(28)

12/04/17

Location

Loc Qty

Loc Code

ST331

781

113973

2

117849 ✓

129

119017

650

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 4

Friday, February 24, 2012 12:42:08 PM

Work Order ID: 80615

80615

Parent Item: D206-642-541

D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 2/24/2012

Required Date: 3/6/2012

Start Qty: 1.00

Required Qty: 1.00

ALS4-1032-130

Purchased

No

250

Each

3,453.000

78

78

AI S4-1032-130

Insert

**

78

(28)

12/04/17

Location

Loc Qty

Loc Code

ST280

1116

119084

116

120671

1000

ST281

2337

119632

3

120410

334

120807 ✓

2000

D3536-15

Manufactured

No

270

Each

18.0000

1

1

D3536-15

Gasket

**

1

(28)

12/04/17

Location

Loc Qty

Loc Code

FP002

18

73318

18

D3536-23

Manufactured

No

270

Each

20.0000

1

1

D3536-23

Gasket

**

1

(28)

12/04/17

Location

Loc Qty

Loc Code

FP002

20

43406

1

73312

7

74510

12

D3536-35

Manufactured

No

270

Each

11.0000

1

1

D3536-35

Gasket

**

1

(28)

12/04/17

Location

Loc Qty

Loc Code

FP002

11

74511

11

Friday, February 24, 2012 12:42:09 PM

Shop Packet Print

Page 4

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 5

Friday, February 24, 2012 12:42:09 PM

Work Order ID: 80615

80615

Parent Item: D206-642-541

D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 2/24/2012

Required Date: 3/6/2012

Start Qty: 1.00

Required Qty: 1.00

D3536-39 Manufactured No

270

Each

20.0000

1

1

D3536-39

Gasket

**

1 (2P) 12/04/17

Location

Loc Qty

Loc Code

FP002

20

73317 ✓

20

D3535-15 Manufactured No

270

Each

16.0000

1

1

D3535-15

Wearshoe

**

1 (2P) 12/04/17

Location

Loc Qty

Loc Code

FP001

16

73315 ✓

4

74512 ✓

12

D3535-35 Manufactured No

270

Each

15.0000

1

1

D3535-35

Wearshoe

**

1 (2P) 12/04/17

Location

Loc Qty

Loc Code

FP001

15

67598

1

70815

1

78873

13

D3535-39 Manufactured No

270

Each

26.0000

1

1

D3535-39

Wearshoe

**

1 (2P) 12/04/17

Location

Loc Qty

Loc Code

FP001

26

69759

1

73316 ✓

13

74513

12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 6

Friday, February 24, 2012 12:42:09 PM

Work Order ID: 80615

80615

Parent Item: D206-642-541

D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 2/24/2012

Required Date: 3/6/2012

Start Qty: 1.00

Required Qty: 1.00

D3535-23 Manufactured No

270

Each

21.0000

1

1

D3535-23

Wearshoe

80336 ✓

**

1

(2P)

12/04/17

Location

Loc Qty

Loc Code

FP001

21

73314

10

74508

11

D3537-3 Manufactured No

270

Each

22.0000

1

1

D3537-3

Wearpad

**

1

(2P)

12/04/17

Location

Loc Qty

Loc Code

FP002

22

74500

17

76986

5

D3537-1 Manufactured No

270

Each

27.0000

9

9

D3537-1

Wearpad

**

9

(2P)

12/04/17

Location

Loc Qty

Loc Code

FP001

22

78592

22

FP002

5

69817

5

AN960C10L * NAS1149C0332 ✓ Purchased No

270

Each

0.0000

80

80

*AN960C10I *

washer

121255 ✓

**

80

(2P)

12/04/17

AN960C416 * NAS1149C0463 ✓ Purchased No

270

Each

0.0000

1

1

AN960C416

washer

117735 ✓

**

1

(2P)

12/04/17

Friday, February 24, 2012 12:42:09 PM

Shop Packet Print

Page 6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 7

Friday, February 24, 2012 12:42:09 PM

Work Order ID: 80615

80615

Parent Item: D206-642-541

D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 2/24/2012

Required Date: 3/6/2012

Start Qty: 1.00

Required Qty: 1.00

D3672-1

Manufactured No

270

Each

904.0000

2

2

D3672-1

Phenolic Washer

**

2

(SP)

12/04/17

Location

Loc Qty

Loc Code

FP001

268

66821

268

ST060

636

72229

136

76277 ✓

500

AN3C4A

Purchased No

270

Each

3,715.000

80

80

AN3C4A

BOLT

**

80

(SP)

12/04/17

Location

Loc Qty

Loc Code

ST350

3715

117313

2

117688

5

117872

10

118112

16

118451

2

119749

10

120187 ✓

2000

120423

10

120521

964

120769

515

120799

181

AN4C5A

Purchased No

270

Each

312.0000

1

1

AN4C5A

BOLT

**

1

(SP)

12/04/17

Location

Loc Qty

Loc Code

ST355

312

112243 ✓

212

119017

100

Friday, February 24, 2012 12:42:09 PM

Shop Packet Print

Page 7

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Friday, February 24, 2012 12:42:09 PM

Work Order ID: 80615

80615

Parent Item: D206-642-541

D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 2/24/2012

Required Date: 3/6/2012

Start Qty: 1.00

Required Qty: 1.00

D2646 Manufactured No

270

Each

78.0000

1

1

D2646

Aft Cap

**

1 0 SP 12/09/17

Location

Loc Qty

Loc Code

FP002

79562 ✓

78

62678

5

68280

5

70945

1

71070

2

73294

1

73825

18

78018

46

D3413-1 Manufactured No

270

Each

104.0000

1

1

D3413-1

Ring

**

1 2P 12/04/17

Location

Loc Qty

Loc Code

ST420

21

70773

1

79233

20

ST464

83

75478

12

76754 ✓

43

77940

28

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

SHORT COPY

DART

UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE

WORK ORDER

NO. 80615

RELEASED

07.02.12

DEO ATTACHED

DESIGN CP	DRAWN BY PH	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
CHECKED #	APPROVED #	DRAWING NO. D3274	REV. D SHEET 1 OF 4
DATE 06.12.19		TITLE SKIDTUBE ASSEMBLY	SCALE NTS
A	04.03.15	NEW ISSUE	
B	04.08.09	MOVE SADDLE HOLE: 42.14 WAS 42.76	
C	05.03.16	ADD -043; NEW INSERTS	
D	06.12.19	NEW INSERTS, SS WEARSHOE + GASKET	

Qty -041	Qty -043	Part Number	Description
X		D3274-041	SKIDTUBE ASSEMBLY
	X	D3274-043	SKIDTUBE ASSEMBLY
1	1	D2600-1-240	EXTRUSION
1	1	D2646	AFT CAP
12	12	D2649	CROSS BOLT SPACER
12	37	D3275-1	CROSS BOLT SPACER
1	1	D3282-041	FLOAT WEB
1	1	D3285-1	CAP
1	1	D3413-1	RING
1	1	D3415-041	NUT PLATE
1	1	D3535-15	WEARSHOE
1	1	D3535-23	WEARSHOE
1	1	D3535-35	WEARSHOE
1	1	D3535-39	WEARSHOE
1	1	D3536-15	GASKET
1	1	D3536-23	GASKET
1	1	D3536-35	GASKET
1	1	D3536-39	GASKET
9	9	D3537-1	WEARPAD
1	1	D3537-3	WEARPAD
78	78	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, AELS-1032-130)
80	80	AN3C4A	BOLT
1	1	AN4C5A	BOLT
1	1	AN960C416	WASHER
80	80	AN960C10L	WASHER
2	2	CCR264SS3-3	RIVET
2	2	CR3212-4-03	RIVET
2	2	NAS1515H3L	WASHER

GENERAL NOTES:

1. TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
2. DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 7 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
3. ALL HOLES DRILLED ON CENTERLINES.
4. BOND D3282-041 FLOAT WEB INTO D3274-1/-3 OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/291 ADHESIVE PER DART QSI 015. ENSURE HOLES LINE-UP.
5. WELDING TO BE DONE PER DART QSI 004.
6. FINISH: - ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1
- POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
7. DRILL Ø0.297 HOLES FOR ALS7-1032-130 INSERTS USING DT3274-1T2 BEFORE FINISH. INSTALL ALS7-1032-130 INSERTS AFTER FINISH. SEAL WEARSHOE BOLTS WITH SIKAFLEX -241/-291.
8. SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

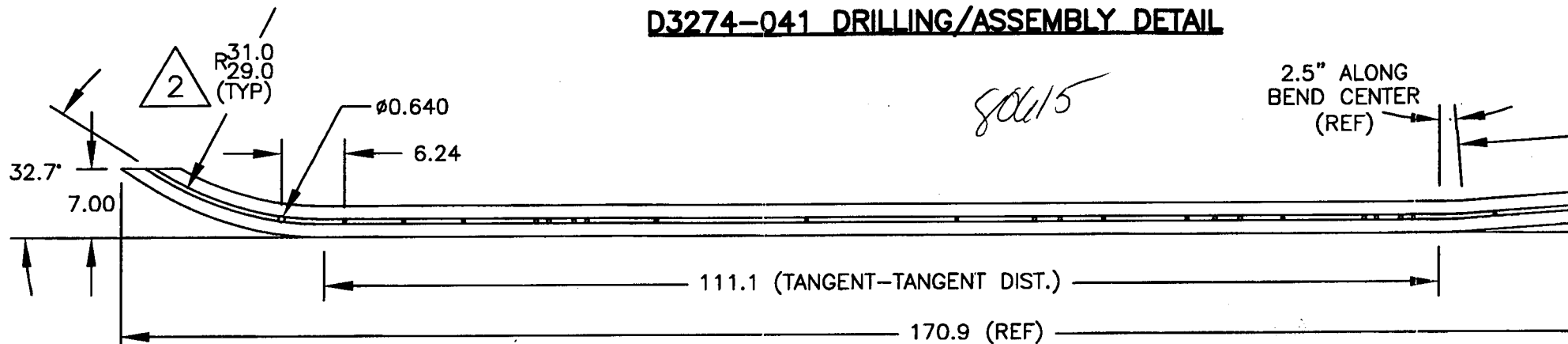
D3282-041
FLOAT WEB

Ø0.313
(TYP, 12 PLACES PER SIDE)

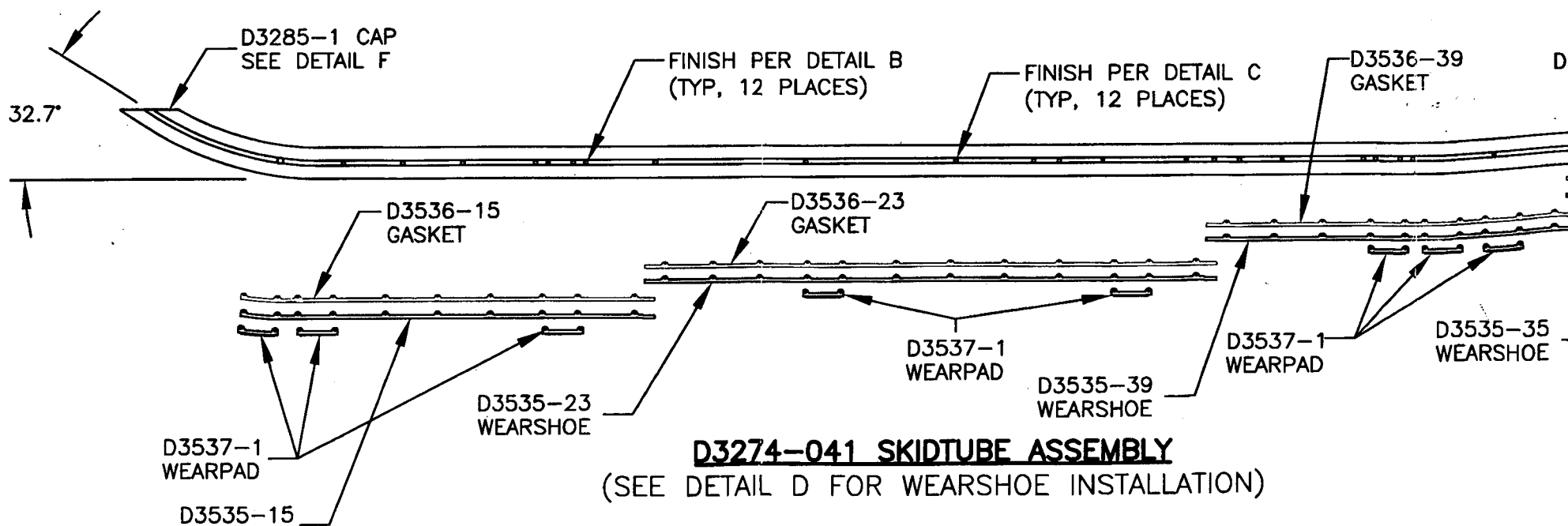
2.500
2.500
35.07
45.33
17.26

82.250
94.57
190 (REF)

D3274-041 DRILLING/ASSEMBLY DETAIL



D3274-041 BEND/DRILLING DETAIL



D3274-041 SKIDTUBE ASSEMBLY

(SEE DETAIL D FOR WEARSHOE INSTALLATION)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

D3282-041
FLOAT WEB

Ø0.313
(TYP, 37 PLACES PER SIDE)

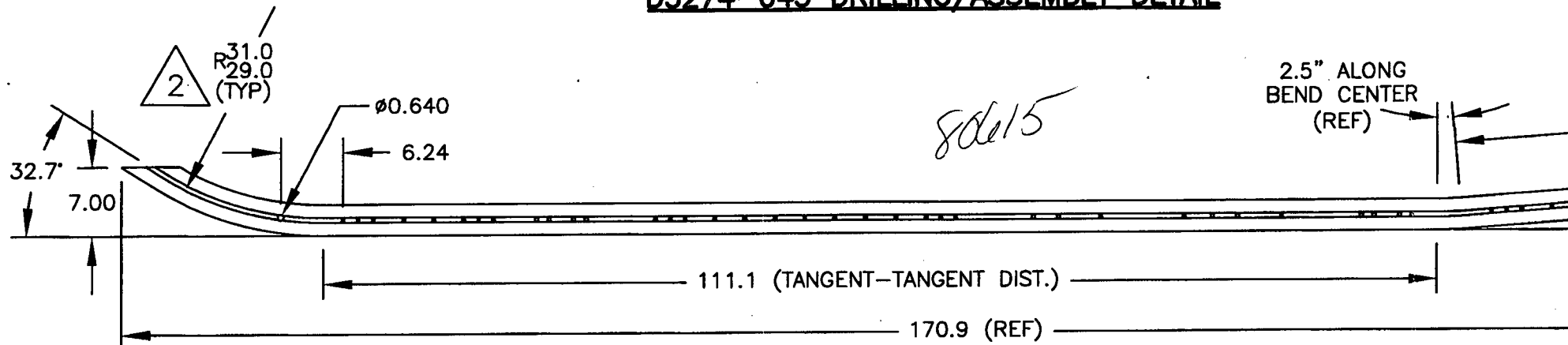
2.500
2.500
35.07
45.33
17.26

82.250

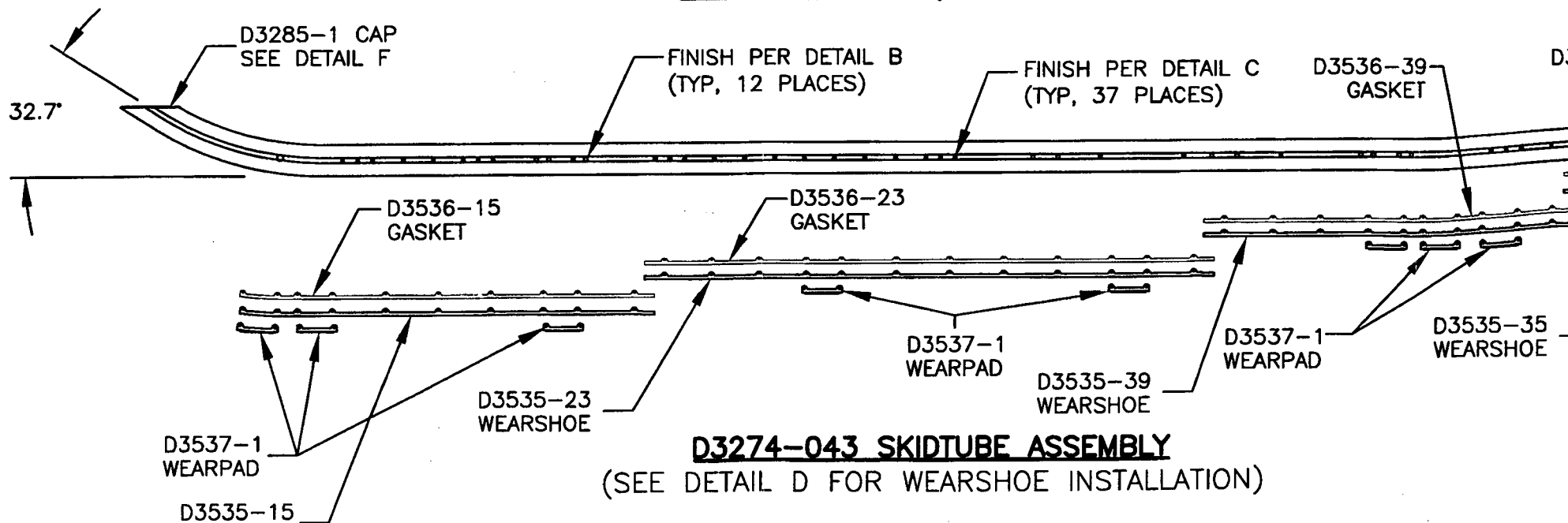
91.57

190 (REF)

D3274-043 DRILLING/ASSEMBLY DETAIL



D3274-043 BEND/DRILLING DETAIL



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DRAWING NO. D3274	TITLE SKIDTUBE ASSEMBLY	REV. D	DART AEROSPACE USA, INC ENGINEERING ORDER	D.E.O. NO. D3274-D-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>UP</i>	CHECKED <i>L</i>	MFG. APPR. <i>M</i>	APPROVED <i>MAP</i>	DE APPR. <i>H</i>		
DATE 09.06.17	DATE 09.06.23	DATE 09/06/23	DATE 09/06/23	DATE 09.06.23		

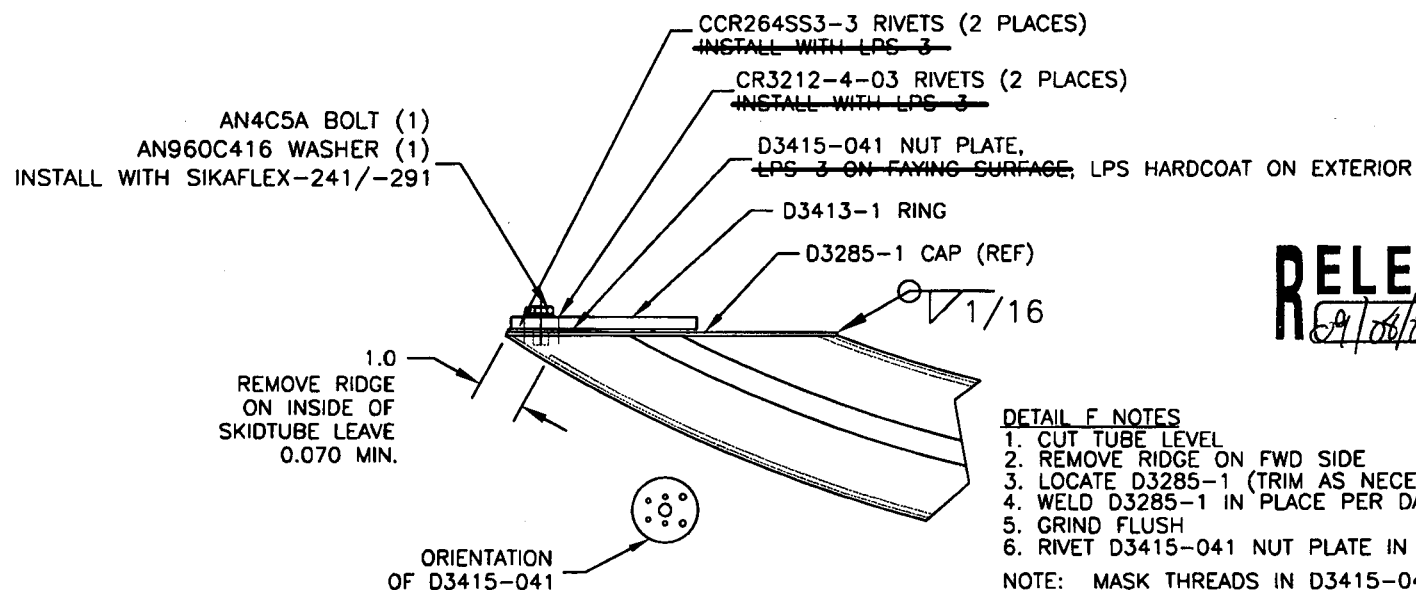
LPS-3 IS NO LONGER USED DURING ASSEMBLY OF SKIDTUBE.

AMEND NOTE 8: "~~SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES 'LPS-3' AFTER FINISH AND INSTALLATION OF INSERTS.~~
COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES 'LPS PROCYON' AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF
POWDER COATING WITH MEK DEGREASER."

AMEND DETAIL F AS SHOWN:

80615

DETAIL F: END FINISHING DETAIL



RELEASED
09/06/23

DETAIL F NOTES

1. CUT TUBE LEVEL
2. REMOVE RIDGE ON FWD SIDE
3. LOCATE D3285-1 (TRIM AS NECESSARY)
4. WELD D3285-1 IN PLACE PER DART QSI 004
5. GRIND FLUSH
6. RIVET D3415-041 NUT PLATE IN PLACE

NOTE: MASK THREADS IN D3415-041
PRIOR TO FINISH

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

NO. 287

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: 796517
Part number: A206-646-341
Description: Skid tube
Welding Process: Tig[☒] Mig[]
Base material: Alum
Current: AC[☒] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[]
Penetration: pass[☒] fail[]

UNACCEPTABLE

Cracks: pass[☒] fail[]
Undercut: pass[☒] fail[]
Pin holes: pass[☒] fail[]
Overlap (cold lap): pass[☒] fail[]
Porosity (surface): pass[☒] fail[]
Coloration: pass[☒] fail[]

Qualifier David Hand Date of Test Coupon 12-04-03
Welder Barclay Elliott Date of Test Coupon 12-04-03

The above named individual is qualified in accordance with AWS D17.1.2001 to weld